



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/910,428	07/19/2001	Chad S. Hale	UVMO:007US/REH	2653

7590 11/13/2003

ROBERT E. HANSON  
FULBRIGHT & JAWORSKI L.L.P.  
SUITE 2400  
600 CONGRESS AVENUE, SUITE 2400  
AUSTIN, TX 78701

EXAMINER

SHUKLA, RAM R

ART UNIT	PAPER NUMBER
----------	--------------

1632

DATE MAILED: 11/13/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/910,428

Applicant(s)

HALE ET AL.

Examiner

Ram R. Shukla

Art Unit

1632

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 18 August 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 26-42, 44 and 46-50 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 26-42, 44 and 46-50 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 19 July 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

### Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

### Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s) \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_ 6) ☐ Other: \_\_\_\_\_

### **DETAILED ACTION**

1. Applicant's response filed 6-3-03 and 8-18-03 have been received.
2. Claims 1-25, 43 and 45 have been cancelled. Claims 26-27, 29-30, 41-42, 45 and 50 have been amended.
3. Claims 26-42, 44 and 46-50 are pending and under consideration in the instant application.

### ***Claim Rejections - 35 USC § 112***

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 34 and 49 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention for reasons of record set forth in the previous office action of 1-29-03.

### ***Response to Arguments***

Applicant's arguments filed 8-18-03 have been fully considered but they are not persuasive. Applicants have argued that the term is sufficiently definite and cite the case laws *Ex parte Eastwood* and *W.L. Gore & Associates, Inc. v. Garlock Inc.* in support of their arguments. It is noted that the cited case laws are not relevant because they dealt with a mold and stretch rate of plastic and these arts are different from the art of breeding. Applicants have not provided any evidence as to what would be the metes and bounds for the recited term "about" in regard to the field of breeding or number of copies of thymine-guanine dinucleotide repeats.

### ***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

Art Unit: 1632

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

7. Claims 26-50 are rejected under 35 U.S.C. 103(a) as being unpatentable over Liu et al (Domestic Animal Endocrinology 17:421-437, 1999) in view of Aggrey et al (The Journal of Heredity 90: 148-151, 1999, Schmutz et al (Mammalian Genome 6:710-713, 1995) and Heap et al (Journal of Animal Science 73:1529-1530, 1995) for reasons of record set forth in the office action of 1-18-2003.

### ***Response to Arguments***

Applicant's arguments filed 8-18-03 have been fully considered but they are not persuasive. Applicants argue

"Liu et al. does not teach that the mutation has any association with increased carcass or weaning weight. Specifically, no teaching or suggestion has been made to show that a genetic polymorphism genetically linked to promoter P1 of exon 1A of the bovine growth hormone receptor gene could be used in order to increase carcass or weaning weight."

However these arguments are not persuasive because Liu et al teaches relationship of GHR and IGF-I expression the relationship of IGF-I gene expression to animal growth and that regulating the expression of IGF-I leads to correlated change in animal growth (see the first paragraph of the section on Discussion). Therefore, at the time of the invention Liu taught that the GHR gene expression and

Art Unit: 1632

P1/P2 promoter function to growth of cattle. Therefore, Liu provides motivation to breed for Beef cattle for P1/P2 promoter. Regarding applicants' arguments about reasonable expectation of success, it is noted that the process of selective breeding of cattle based on genetic markers was well known and practice by an artisan at the time of the invention.

Therefore, it is reiterated that at the time of the invention, it would have been obvious to an artisan of ordinary skill to breed beef cattle comprising genetic polymorphism linked to P1 promoter of exon 1A growth hormone receptor gene with another beef cattle to increase probability of obtaining beef cattle head comprising predisposition to increased or decreased carcass or weaning weight with a reasonable expectation of success by following the routine methods of breeding and DNA marker selection. An artisan would have been motivated to carry out such breeding because the relationship of P1 promoter of exon 1A growth hormone receptor gene with growth of cattle was well known at the time of the art and it was a normal practice in the art among breeders to select animals with better traits in terms of milk production, quality of meat etc. Regarding the limitations of conditions of PCR, types of polymorphism, number of thymine guanine dinucleotide repeats, gel electrophoresis and different species of beef cattle, it is noted that such methods and breeding techniques between different species was common and well known (for example, see C2, C3, C7, C9, C21 etc. in the IDS).

8. No claim is allowed.

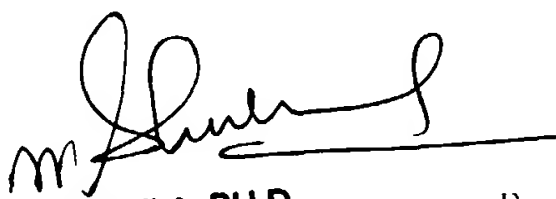
**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be

Art Unit: 1632

calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ram R. Shukla whose telephone number is (703) 305-1677. The examiner can normally be reached on Monday through Friday from 7:30 am to 4:00 p.m. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Deborah Reynolds, can be reached on (703) 305-4051. The fax phone number for TC 1600 is (703) 703-872-9306. Any inquiry of a general nature, formal matters or relating to the status of this application or proceeding should be directed to the William Phillips whose telephone number is (703) 305-3413.



**RAM R. SHUKLA, PH.D.**  
**PRIMARY EXAMINER**

Ram R. Shukla, Ph.D.  
Primary Examiner  
Art Unit 1632